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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Smith, et al.

Serial No.: 09/703,213

Filed: October 31, 2000

For: METHOD AND SYSTEM FOR OBSCURING
USER ACCESS PATTERNS USING A BUFFER
MEMORY

Confirmation No. 9605

Art Unit: 2145

Examiner: Adnan M. Mirza

Attorney Docket No. 062105-0005-US
(formerly 10199-005)

PRE-APPEAL BRIEF REQUEST FOR REVIEW

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Commissioner for Patent
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is to request pre-appeal brief review of the final Office Action of July 27, 2005 which rejected claims 1-24 under 35 U.S.C. 103(a) as unpatentable over Beser, et al. (U.S. Patent No. 6,523,068) and Peckover (U.S. 6,119,101).

Applicants' invention is directed to a method for obscuring user access patterns in a computer network. An example of the kind of access patterns that are obscured by the present invention is the "click data" that can be tracked as a user visits a server computer with his or her browser.

In accordance with the invention, user access patterns are obscured in two ways. First, some access patterns are never made available to the server computer. This is accomplished by using a cache memory to store some of the information requested by the user computer. The operation of a cache memory is described at page 5, lines 14-25 of applicants' specification:

"In particular, the use of a small amount of 'buffer' cache memory,

consisting of a small portion of fast, expensive memory, in conjunction with a larger, cheaper, slower memory, has proven effective. Buffer caches are widely used in computer systems because computer programs exhibit 'locality of reference' properties such that references in the program to memory locations tend to access repeatedly the same locations in memory. This makes it feasible to reduce system costs and improve average access time by storing the computer program in the slow memory and transferring referenced items from the slow memory to the fast memory, where they can be used subsequently. When references, arranged in a so-called 'reference string,' are made against the combined memories, access time is improved whenever the reference string repeatedly accesses the same locations, so that the references can be satisfied with the copy in fast memory."

While the cache memory of applicants' invention ultimately gets its information from the server computer, the cache memory will be able to service some of the user computer's repeated requests from its own memory contents and will not have to access the server computer. As a result., for these repeated requests, no access is made to the server computer and these parts of the user's access patterns are never made available to the server computer. For example, as shown in applicants' Fig. 1, requests for indices 05, 09 and 03 shown in rows 106, 108 and 110 are obscured since these requests are satisfied from the cache memory instead of the server computer. See page 7, line 33 to page 8, line 11, of the specification.

Where the requested information is not available in the cache memory, a second technique is employed to obscure the user's access patterns to the server computer. In particular, the request is edited to obscure user identity information. See, step 165 of Fig. 2 and page 8, line 13, of the specification. As a result, anyone attempting to trace the request will have difficulty linking it to the user computer.

These features of applicants' invention are captured in the language of the claims. For example, method claim 1 requires a user request for information from another network member to be routed first to a cache memory and for the requested information to be provided if the cache memory contains the information without releasing the request to the network member. Further, claim 1 requires that if the cache memory does not contain the requested information, user identity

information in the request is edited to obscure such information. before the edited request is released to the network member.

Independent claims 11 and 19 which are directed to a computer program and to a system, respectively, are similar.

In rejecting the claims, the Examiner relies on Beser for everything except details relating to the editing of user identity information to obscure the identity information. Beser, however, does not disclose applicants' claimed use of a cache memory.

Beser is directed to a method for hiding the destination and source addresses found in the header of message packets by encapsulating the message packets in other message packets. Thus, as illustrated in Fig. 20 or Fig. 24, a packet having a second header and a second payload is incorporated as the payload within another packet having a first header. Beser, however, does not disclose the use of a cache memory and in particular does not disclose the use of a cache memory that may store information requested by the user. Further, Beser does not disclose the use of a cache memory that returns the requested information if the information is in the cache memory, thereby avoiding release of the user request to a network member.

The Examiner appears to assert that the use of a cache memory is described at col. 7, lines 65-67 and col. 8 lines 1-14 of Beser. However, a review of these lines reveals that they simply describe how data is packetized and transmitted using the Internet Protocol. The Examiner also asserts that the operation of a cache memory is described at col. 18, lines 43-52. Again, however, such details are not taught in Beser. What is taught at col. 18, lines 43-52 is simply the examination of an IP packet 232 at network device 14 to determine if it includes the address of another device. Network device 14 is not a cache memory.

Peckover is relied upon only for the teaching of details about the editing of user information to obscure identity information. Peckover discloses a system of agents for representing buyers and

sellers in ecommerce including a consumer personal agent, a provider personal agent, a decision agent and a demand agent. Peckover, however, does not disclose any use of a cache memory or the specific application to which the cache memory is put in applicants' invention.

In the absence of any teaching in Beser or Peckover of any use of a cache memory or the specific application to which the cache memory is put in applicants' invention, independent claims 1, 11 and 19 are patentable over the art cited.

Dependent claims 2-10, 12-18 and 20-27 are believed patentable for the same reason claims 1, 11 and 19 are patentable. Dependent claims 2, 3, 12, 13, 20 and 21 are believed patentable for the additional reason that they teach the use of an additional cache memory in the method, program and system of the present invention. In rejecting these claims, the Examiner relies on col. 18, lines 43-52, and col. 31, lines 37-45 of Beser, the same disclosure on which the Examiner relies in rejecting claims 1, 11 and 19. However, network device 14 of Beser is not a cache memory and these lines do not disclose the use of two cache memories.

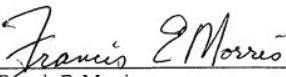
In his response to applicants' arguments that Beser did not disclose any use of a cache memory, the Examiner refers to a statement at col. 22, lines 33-35 of Beser that the network device "may store the private network addresses . . . on the originating network device." This, however, is not a teaching about the use of a cache memory for any function, let alone the functional relationships specified in the claims.

Further, the Examiner asserts that it is known that a cache is defined as storage space and every network device consists of storage space. The point of these assertions is not understood. While network devices may include storage space, Beser's teachings on the use of network devices do not disclose or suggest the use of caches and they do not suggest the specific uses of the cache memory recited in the claims.

In light of the above remarks, the applicants respectfully request that this application
be reconsidered with a view towards allowance.

Respectfully submitted,

Date: January 27, 2006

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